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erature. A three-year intervention was assumed with outcomes of: 1) a -year duration of effect; and 2) a lifetime duration of effect. A second set of models included an additional increased cost of illness for obese NGT subjects, and an increased mortality rate for obese T2DM subjects over the base-case. **RESULTS:** Lifestyle dominated placebo in all models tested. In the obesity-adjusted model, subjects had higher lifetime costs and shorter duration of life. The following incremental cost-effectiveness ratios were derived: 1) base-case model – three-year duration = –$16,064/LY; 2) base-case model – lifetime duration = –$19,496; 3) obesity-adjusted model – three-year duration = –$2278/LY; and 4) obesity-adjusted model – lifetime duration = –$4281/LY. A maximal acceptable cost of intervention per year for the three-year duration of effect that could be used to maintain lifestyle dominance was also established. The value for the obesity-adjusted model was approximately 45% of that found for the base-case model. **CONCLUSION:** Researchers examining the cost-effectiveness of intensive lifestyle intervention to prevent T2DM should be aware of the potential effect of obesity adjustments when developing models, in particular, the effects of obesity on mortality and costs for NGT subjects.

DB8

THE IMPACT OF GLYCEMIC CONTROL ON THE INCIDENCE OF DIABETIC COMPLICATIONS

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OBJECTIVE: Cost models are often criticized for limited or obscure selection of transition probabilities, especially when several estimates are available. We conducted a systematic review of population-based studies estimating the impact of improved glycemic control on the incidence of microvascular (retinopathy, nephropathy, and neuropathy/diabetic sores and ulcers/lower extremity amputations(LEA)) and macrovascular (myocardial infarction and stroke) complications of type-2 diabetes mellitus. **METHODS:** Literature searches using keyword and MESH algorithms in the PubMed bibliographic database, and hand search. Studies had to be published between 1985–2004, conducted in Australia, North America, or Europe, and compare the risk for macrovascular or microvascular complications per % difference in HbA1c over three to ten years. Two reviewers independently extracted study and population characteristics and the relative risk (RR) associated with a 1% crude difference in HbA1c. Odds-ratios were treated as RRs. Meta-analytic pooled estimates were calculated for complications with more than one RR estimate using random effects models. To account for variation in study design validity cohort and experimental studies were weighted twice as much as cross-sectional studies. **RESULTS:** RR estimates were obtained for retinopathy (eight estimates), nephropathy (four), all-cause mortality (two), myocardial infarction (one), diabetic sores and ulcers (one), and LEA (one). No RR estimate was identified for stroke. A crude 1% difference in HbA1c was found to reduce the likelihood of retinopathy by 25% (95% CI: 19%–30%), nephropathy by 22% (13%–32%), all-cause mortality by 17% (10%–27%), myocardial infarction by 16% (9%–27%), diabetic sores and ulcers by 30% (20%–50%), and LEA by 30% (10%–50%). **CONCLUSIONS:** A crude 1% decrease in HbA1c leads to a significant reduction in the incidence of serious diabetic complications. Epidemiologic studies were surprisingly scarce, especially for macrovascular complications and population subgroups. Laboratory-enriched claims databases would be ideal for future studies relating HbA1c to diabetic complications.

Mental Health

MH1

TREATMENT COSTS OF ALZHEIMER'S DISEASE IN THE CALIFORNIA MEDICAID (MEDI-CAL) PROGRAM FROM 1995 TO 2002

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OBJECTIVES: To estimate the treatment costs incurred by Alzheimer's disease (AD) patients in Medi-Cal over an eight-year span (1995–2002). **METHODS:** AD patients were identified (ICD-9 = 331.0) using 20% sample of Medi-Cal administrative claims data from January 1, 1995 to December 31, 2002, and were 1:10 matched to the a control group without AD diagnosis based on age and gender. Annual total treatment costs were calculated for both groups. For patients with AD, yearly expenditures after the initial diagnosis were also measured. All costs were eligibility-adjusted by the number of eligible months. **RESULTS:** In total, 6494 cases and 64,940 controls were identified. The average age was 83.6 (+/–12.2) and 69.5% were female. The average annual treatment costs were more than two-fold higher for AD patients than controls ($13,978 vs. $6188, $p < 0.0001$). Without adjusting for inflation, the treatment costs for a typical AD patient increased from $10,032 in 1995 to $19,446 in 2002. During the first year after the initial diagnosis, the average treatment costs for AD was $17,725. The costs increased slightly over time for those patients who survived and remained in Medi-Cal and by the fourth year, the treatment costs increased to $18,064. For the first year, nursing home costs accounted 81% of the total costs, followed by pharmacy (8%) then outpatient (6%). For AD alone, it is estimated that Medi-Cal paid an incremental $84 million in 1995 and $200 million in 2002. **CONCLUSIONS:** This study demonstrated that AD is an increasingly costly disease, and treatment costs were doubled from 1995–2002. Consistent with previous studies, nursing home care was the major component of health care costs.

(For abstract MH2 see page 385) **PMH2**

COSTS OF TREATING CRISIS-PRONE SCHIZOPHRENIA PATIENTS

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OBJECTIVES: To assess the one-year direct mental health costs of treating crisis-prone schizophrenia patients. **METHODS:** Data were drawn from a large multi-site prospective naturalistic study of schizophrenia patients in the United States, conducted between July, 1997 and September, 2003. Participants were treated at large mental health systems, including the Veterans Health Administration, community health centers, community and state hospitals, and university health care delivery systems. Total mental health cost and component costs (psychiatric hospitalizations, antipsychotic medications, other psychotropic medications, day treatment, emergency psychiatric services, psychosocial/rehabilitation group therapy, individual therapy, medication management, and case management), were calculated for 1557 participants with complete medical information. Propensity score adjusted bootstrap re-sampling methods were used to compare one-year direct costs of five crisis-prone subgroups, defined as having: prior suicide attempt (in past four weeks, yes/no), psychiatric hospitalization (in past six months, yes/no), prior arrest (in past six months, yes/no), prior violent behaviors

(in past four weeks, yes/no), and comorbid diagnosis of substance use disorder (yes/no). **RESULTS:** The average annual mental health cost was highest for patients who attempted suicide (yes $46,024, no $15,865), followed by patients with psychiatric hospitalization in the past six months (yes $37,329, no $12,229), patients with arrests (yes $31,081, no $15,655), prior violent behaviors (yes $18,778, no $16,113), and those with comorbid substance use disorder (yes $19,034, no $15,038). **CONCLUSIONS:** Crisis-prone patients, particularly those with a recent suicide attempt or psychiatric hospitalization tend to incur substantial mental health costs. Findings also suggest that patients who are involved in the criminal justice system also accrue high costs within the mental health delivery system.

MH3

SUPPORT FOR CLASSIFICATION OF DEPRESSION OUTCOMES INTO LONGITUDINAL PATTERNS: EVIDENCE FROM A POPULATION-BASED STUDY OF THE ELDERLY

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OBJECTIVE: To examine the longitudinal relationship between depression outcomes and subsequent functional disability (FD) in the non-institutionalized elderly. **METHODS:** Secondary data analysis was performed using the population-based Assets and Health Dynamics of the Oldest Old (AHEAD) cohort (age ≥70 years). Depression was considered present if four or more depressive symptoms were reported on the modified Center for Epidemiological Studies-Depression Scale (CES-D). CES-D scores from baseline, two-year and five-year follow-up allowed the characterization of seven distinct patterns of depression (plus never depressed): remittent, endogenous, emergent, remitting persistent, recurrent, emerging persistent and persistent. FD was operationalized as the ability to perform six activities of daily living (ADL) and five instrumental ADL. The subsequent impact of depression patterns on FD scores (at two, five and seven-year follow-up) over time was analyzed using mixed-effect regression models. **RESULTS:** Of the 8222 initial respondents, 57% were considered ineligible. Among the remaining 3476 respondents, half were never depressed. Pattern-based FD mean (SD) scores were: remittent 1.4 (2.4) (n = 166); endogenous, 1.4 (2.2) (n = 136); recurrent, 2.03 (2.6) (n = 63); emergent 1.2 (2.2) (n = 332); remittent persistent 1.9 (2.5) (n = 64); recurrent 2.0 (2.6) (n = 103); emerging persistent 2.1 (2.6) (n = 108) and persistent 2.1 (2.5) (n = 144). After adjusting for age, gender, and comorbidity, and baseline FD, all patterns had significantly more FD than those never depressed, with the exception of the remittent pattern. Compared to an emergent pattern, emerging persistent (difference = 0.69 (0.19), $p < 0.001$) and persistent pattern (difference = 0.49 (0.15), $p < 0.001$) had higher mean FD over time. **CONCLUSIONS:** The elderly with depression have more FD compared to those never depressed, but FD can improve with the remission of depression. Important differences in FD scores between depression patterns were observed (i.e. effect sizes >0.5), providing health outcomes-based support for a pattern-based classification of longitudinal depression.

MH4

EFFECT OF SECOND-GENERATION ANTIDEPRESSANT DISCONTINUATION ON DEPRESSIVE RELAPSE IN ADULT PATIENTS WITH BIPOLAR DEPRESSION

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OBJECTIVES: There are almost no data addressing antidepressant's long-term prophylaxis use that both establishes the mood stability and delays depressive episodes in patients with bipolar disorder. This study concentrated on the question that whether patients who continued taking antidepressant beyond 6 months after depressive remission are less likely to have depressive relapse than patients who discontinued early, with a focus on modern second-generation antidepressant medications. **METHODS:** A total of 589 bipolar subjects were identified with interested antidepressant use after a depressive remission, followed by at least 6-months of continuous enrollment in a national managed care plan between January 1998 and December 2002. Duration of pharmacotherapy was defined based on the computerized diagnosis and pharmacy records. A Cox proportional hazard model was developed to predict time from depressive remission to next depressive relapse with continuous antidepressant use either longer or shorter than 6 months. Propensity score method with greedy matching was employed in addition to further balance the observed background covariates and baseline disease severity between comparison groups. **RESULTS:** The Kaplan-Meier estimate of the sample from propensity score matching showed that time to 50% survival with continuation and discontinuation groups were 16.5 months and 6.8 months respectively. The log-rank homogeneity test of survival curves indicated a significant difference ($p < 0.05$). The Cox model identified a significantly lower risk of depressive relapse among those who continued antidepressant treatment beyond 6 months after remission than those who discontinued treatment within 6 months, with a statistically significant hazard ratio of 0.61 (95% CI: 0.42–0.88). **CONCLUSIONS:** This study suggests the potential adverse outcome of removing an antidepressant treatment after depressive remission in patients with bipolar disorder. Given the concerns regarding a risk of switching into mania by antidepressant use, an optimal prophylaxis treatment after depressive remission should balance risks between depressive relapse and manic switch.